Topology Seminar

David Carchedi

of Max Planck Institute will be speaking on

A differential graded approach to derived manifolds

on September 30 at 4:30 in
MIT Room 2-131

Given two smooth maps of manifolds $f : M \to L$ and $g : N \to L$, if they are not transverse, the fibered product $M \times_L N$ may not exist, or may not have the expected dimension. In the world of derived manifolds, such a fibered product always exists as a smooth object, regardless of transversality. In fact, every derived manifold is locally of this form. In this talk, we briefly explain what derived manifolds ought to be, why one should care about them, and how one can describe them. We end by explaining a bit of our joint work with Dmitry Roytenberg in which we make rigorous some ideas of Kontsevich to give a model for derived intersections as certain differential graded manifolds.